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Atty. Dkt. No. APPM/008075.Y1/PPC/CMP/CKIM

THE PENDING CLAIMS:

1. (Previously Presented) A method of selectively removing a dielectric disposed on a substrate having a first dielectric material and a second dielectric material disposed thereon, comprising:

pre-polishing the substrate to planarize the substrate by removing a bulk overfill of the first dielectric material;

positioning the substrate in proximity with a fixed abrasive chemical mechanical polishing pad;

dispensing a polishing composition having at least one organic compound therein between the substrate and the polishing pad; and

chemical mechanical polishing the substrate, wherein the at least one organic compound enhances the removal rate of the first dielectric material using the fixed abrasive chemical mechanical polishing pad without affecting the removal rate of the second dielectric material.

2. (Previously Presented) The method of claim 1, wherein the at least one organic compound is selected from the group consisting of amino acids and combinations thereof.

3. (Original) The method of claim 2, wherein the amino acid comprises glycine.

4. (Original) The method of claim 1, wherein the at least one organic compound forms between about 0.01 weight percentage (wt. %) and about 20 wt. % of the polishing composition.

5. (Previously Presented) The method of claim 1, wherein the polishing composition further comprises at least one pH adjusting agent, deionized water, or combinations thereof.

PATENT

Atty. Dkt. No. APPM/006075.Y1/PPC/CMP/CKIM

6. (Original) The method of claim 1, wherein the polishing composition is an abrasive free composition and comprises between about 1 wt. % and about 8 wt. % glycine, deionized water, and potassium hydroxide as the pH adjusting agent.

7. (Original) The method of claim 1, wherein the pH of the polishing composition is about 7 or more.

8. (Original) The method of claim 1, wherein the pH of the polishing composition is between about 9 and about 12.

9. (Original) The method of claim 1, wherein the substrate includes a shallow trench isolation structure comprising the first and second dielectric layers.

10. (Original) The method of claim 9, wherein at least one of the first and second dielectric materials comprises a nitride layer.

11. (Original) The method of claim 1, wherein the first dielectric material has a first removal rate and the second dielectric material has a second removal rate less than the first removal rate.

12. (Original) The method of claim 11, wherein the first dielectric material is silicon oxide and the second dielectric material is silicon nitride.

13. (Original) The method of claim 11, wherein the silicon oxide is removed at a rate between about 50 Å/min and about 5000 Å/min.

14. (Original) The method of claim 13, wherein the silicon nitride is removed at a rate between about 0.01 Å/min and about 300 Å/min.

15. (Original) The method of claim 11, wherein the silicon oxide and the silicon nitride are removed at a removal rate ratio of about 10:1 or greater.

PATENT
Atty. Dkt. No. APPM/006075.Y1/PPC/CMP/CKIM

16. (Original) The method of claim 11, wherein the silicon oxide and the silicon nitride are removed at a removal rate ratio from about 100:1 to about 2000:1.

17. (Previously Presented) A method of processing a substrate to selectively remove an oxide material disposed on a nitride material, comprising:

pre-polishing the substrate to planarize the substrate by removing a bulk overfill of the oxide material;

positioning the substrate in proximity with a fixed abrasive chemical mechanical polishing pad;

dispensing a polishing composition having at least one organic compound, at least one pH adjusting agent, and deionized water, between the substrate and the polishing pad, wherein the at least one organic compound enhances the removal rate of the oxide material using the fixed abrasive chemical mechanical polishing pad without affecting the removal rate of the nitride material; and

removing the oxide material and the nitride material at a removal rate ratio of the oxide material to the nitride material of about 10:1 or greater.

18. (Original) The method of claim 17, wherein the oxide material is silicon oxide and the nitride material is silicon nitride.

19. (Original) The method of claim 17, wherein the oxide material and the nitride material are removed at a removal rate ratio of the oxide material to the nitride material from about 100:1 to about 2000:1.

20. (Original) The method of claim 17, wherein the at least one organic compound comprises amino acids and combinations thereof.

21. (Original) The method of claim 17, wherein the at least one organic compound comprises glycine.

PATENT

Atty. Dkt. No. APPM/008075.Y1/PPC/CMP/CXIM

22. (Original) The method of claim 17, wherein the at least one organic compound forms between about 0.01 wt. % and about 20 wt. % of the polishing composition.

23. (Original) The method of claim 17, wherein the polishing composition is an abrasive free composition and comprises between about 1 wt. % and about 8 wt. % of glycine, deionized water, and potassium hydroxide as the pH adjusting agent.

24. (Original) The method of claim 17, wherein the pH of the polishing composition is about 7 or more.

25. (Original) The method of claim 17, wherein the pH of the polishing composition is between about 9 and about 12.

26-29. (Cancelled)

30. (Previously Presented) A polishing system for selectively removing dielectric material disposed on a substrate, comprising:

a first polishing platen in proximity with the substrate;
a second polishing platen having a fixed abrasive polishing pad disposed thereon and in proximity with the substrate for polishing the substrate; and
a controller configured to cause the system to contact the substrate, such that the first polishing platen is in contact with the substrate, to remove a bulk overfill of a first dielectric material, and then to deliver to the substrate a polishing composition having at least one organic compound therein such that the polishing composition is in contact with the substrate and the fixed abrasive polishing pad, and to remove the first dielectric material at a higher removal rate than a second dielectric material, wherein the at least one organic compound enhances the removal rate of the first dielectric material using the fixed abrasive chemical mechanical polishing pad without affecting the removal rate of the second dielectric material.

PATENT

Att. Dkt. No. APPN/D05075.V1/PPC/CMP/CKIM

31. (Original) The system of claim 30, further comprising:
a carousel;
at least one substrate head assembly suspended from the carousel and capable
of holding a substrate thereon; and
a positioning member coupled to the carousel to move the carousel and to
position the substrate head assembly over the polishing platen.

32. (Original) The system of claim 30, wherein the polishing platen is a linear
web, a linear belt platen, or a rotatable platen.

33. (Previously Presented) A method of processing a substrate having a first
material and a second material disposed thereon, comprising:
pre-polishing the substrate to planarize the substrate by removing a bulk overfill
of the first dielectric material;
positioning the substrate in proximity with a fixed abrasive chemical mechanical
polishing pad;
dispensing a polishing composition having at least one amino acid, at least one
pH adjusting agent, and deionized water, between the substrate and the fixed abrasive
chemical mechanical polishing pad;
chemical mechanical polishing the substrate; and
removing the first material at a higher removal rate than the second material,
wherein the at least one organic compound enhances the removal rate of the first
material using the fixed abrasive chemical mechanical polishing pad without affecting
the removal rate of the second material.

34. (Previously Presented) The method of claim 33, wherein the first material is
an oxide material and the second material is a nitride material.

35. (Previously Presented) The method of claim 33, wherein the at least one
amino acid is selected from the group consisting of glycine, proline, arginine, lysine, and
combinations thereof.

PATENT

Atty. Dkt. No. APPM/008075.Y1/PPC/CMP/CKM

36. (Previously Presented) The method of claim 33, wherein the at least one amino acid forms between about 0.01 wt. % and about 20 wt. % of the polishing composition.

37. (Previously Presented) The method of claim 2, wherein the amino acid comprises proline.

38. (Previously Presented) The method of claim 20, wherein the amino acid comprises proline.